In the Claims:

Please add new claims 27 to 29 and amend claim 1, 5, and 9 to 12 as follows:

1.(currently amended) A method for detecting faults in a transparent manufactured material in order to ascertain whether or not the transparent manufactured material meets predetermined specifications during quality control testing, said method comprising the steps of:

a) irradiating a definite partial volume entirely within an interior of the transparent manufactured material with a first radiation source;

b) coupling light of a second radiation source into the transparent manufactured material so that an optical path of said light passes through said definite partial volume entirely within said interior of the transparent manufactured material;

c) detecting scattered light from said fault in said partial volume, detecting bright field absorption from said fault in said partial volume and/or detecting deflection of light of said first radiation source by said fault in said partial volume in order to detect the presence of said fault in said partial volume of the transparent manufactured material; and

d) determining a fault type of said fault from a ratio of a bright field signal to a scattered light signal or from a ratio of a deflection signal to said scattered light signal; and

e) producing an output signal characterizing the fault type of said fault detected within said definite partial volume according to said ratio.

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2. (original) The method as defined in claim 1, further comprising measuring the material with local spatial resolution.

Claim 3. (canceled)

4. (original) The method as defined in claim 1, wherein said second radiation source emits monochromatic light.

5. (currently amended) The method as defined in claim 1, wherein said transparent manufactured material is ~~light from said second radiation source is coupled into a~~ flat glass sheet or a flat glass plate.

6. (original) The method as defined in claim 1, wherein said second radiation source emits green light.

7. (original) The method as defined in claim 6, wherein said green light has a wavelength of 532 nm.

8. (original) The method as defined in claim 1, wherein said second radiation source emits red light.

9. (currently amended) The method as defined in claim 1, wherein said light of the second radiation source coupled into the transparent manufactured material

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has an intensity that is about ten times higher at an edge of the transparent manufactured material than in a center of the transparent manufactured material.

10. (currently amended) The method as defined in claim 9, wherein said light of the second radiation source is coupled into the transparent manufactured material so that said light experiences total reflection in the interior of the transparent manufactured material.

11. (currently amended) The method as defined in claim 5, wherein said light of the second radiation source is coupled into the flat glass sheet or flat glass plate so that said light experiences total reflection in the interior of the transparent manufactured material.

12. (currently amended) The method as defined in claim 5, wherein said light of the second radiation source is coupled into the transparent manufactured material through a transparent liquid.

13. (original) The method as defined in claim 1, wherein both of said radiation sources emit pulsed light and one of the radiation sources emits pulses of said pulsed light only in pause intervals between pulses from another of the radiation sources.

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14. (original) The method as defined in claim 1, wherein said first radiation source is divided into two parts and said two parts emit different colored light.

15. (previously presented) An apparatus for detecting faults in transparent material, said apparatus comprising

a first radiation source for illumination of a definite partial volume of the transparent material,

a detector for light originating from said partial volume; and

a second radiation source arranged in relation to the transparent material so that an associated optical path extends exclusively in an interior of the transparent material;

wherein said first radiation source comprises two parts emitting light of different intensities and wavelengths.

Claim 16. (canceled)

17. (previously presented) The apparatus as defined in claim 15, wherein said two parts of the first radiation source comprise different colored LEDs.

18. (original) The apparatus as defined in claim 15, wherein said first radiation source is pulsed.

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19. (previously presented) The apparatus as defined in claim 15, wherein said detector is arranged for detection of bright field light in such a way that said detector detects radiation from both of said two parts of the first radiation source.

20. (original) The apparatus as defined in claim 15, wherein one of said first radiation source and said second radiation source emits in a green wavelength range.

21. (original) The apparatus as defined in claim 15, wherein said second radiation source is a laser.

22. (original) The apparatus as defined in claim 21, wherein said laser has an emission frequency of 532 nm.

23. (original) The apparatus as defined in claim 21, wherein said laser is a pulsed laser.

24. (original) The apparatus as defined in claim 15, further comprising an electronic device for controlling said first radiation source and said second radiation source so that the first radiation source and the second radiation source emit only time-shifted light.

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25. (original) The apparatus as defined in claim 15, wherein said detector detects a bright field signal, a scattered light signal and/or a deflection signal.

26. (original) The apparatus as defined in claim 15, wherein said detector is a CCD camera.

27. (new) The apparatus as defined in claim 15, wherein said first radiation source comprises two different light emitting diodes (LEDs) and said two different light emitting diodes emit light of different colors or intensities.

28. (new) An apparatus for detecting faults in a transparent manufactured material to determine whether or not the transparent manufactured material meets specifications during quality control testing, said apparatus comprising

a first pulsed light source arranged to illuminate a definite partial volume in an interior of the transparent manufactured material,

a detector for light originating from said definite partial volume;

a second pulsed light source arranged in relation to the transparent manufactured material so that an optical path of light from said second pulsed light source extends exclusively through the definite partial volume in the interior of the transparent manufactured material; and

an electronic means for controlling said first pulsed light source and said second pulsed light source, so that said first pulsed light source emits light pulses

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exclusively in intervals between light pulses originating from said second pulsed light source.

29. (new) A method for detecting faults in a transparent manufactured material in order to ascertain whether or not the transparent manufactured material meets predetermined specifications during quality control testing, said method comprising the steps of:

a) irradiating a definite partial volume entirely within an interior of the transparent manufactured material with a first radiation source;

b) coupling light of a second radiation source into the transparent manufactured material so that an optical path of said light passes through said definite partial volume entirely within said interior of the transparent manufactured material;

c) detecting scattered light from said fault in said partial volume, detecting bright field absorption from said fault in said partial volume and/or detecting deflection of light of said first radiation source by said fault in said partial volume in order to detect the presence of said fault in said partial volume of the transparent manufactured material; and

d) determining a fault type of said fault from a ratio of a bright field signal to a scattered light signal or from a ratio of a deflection signal to said scattered light signal;

e) providing an analyzing unit for processing detected signals from said definite partial volume, said detected signals including said scattered light signal

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and said detected signals also including said bright field signal and/or said deflection signal, in order to ascertain the type of said fault within said definite partial volume according to said ratio determined in step d); and

f) outputting the type of said fault from said analyzing unit.

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